

# Notice of Allowability

Application No.

10/527,107

Examiner

Sam Rizk

Applicant(s)

LAMY, CATHERINE

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/20/2006.
2. ☒ The allowed claim(s) is/are 1-3,5-17.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
ALBERT DECADY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

### **DETAILED ACTION**

- Response to the applicant's amendment dated 7/20/2006
- Claim 4 has been Cancelled
- Added new claims 13-17
- Amended claims 1-3, 5-17 have been submitted for examination
- Amended claims 1-3, 5-17 have been allowed

#### ***Claim Objections***

1. In view of the applicant amended claims 1,2,8 and 9 filed on 7/20/2006; all objections to the claims 1,2,8 and 9 are withdrawn.

#### ***Drawings Objections***

2. In view of the applicant arguments, see pages 12, filed on 7/20/2006, all objections to the drawings are withdrawn.

#### ***Response to Arguments***

Applicant's arguments see pages 13-15, filed on 7/20/2006, with respect to amended claims 1-3, 5-12 have been fully considered and are persuasive. The rejections of claims 1-3,5-12 have been withdrawn.

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record attached to this office. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

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3. Authorization for this examiner's amendment was given in a telephone interview with attorney Gregory L. Thorne on 9/29/2006.
4. Replace claim 8 to read:
  - (Currently amended) A computer product stored on a computer readable medium for a decoder comprising a set of instruction, which, when loaded into said decoder, configure the decoder to carry out each of the acts in any one of claims 1-3.
5. Replace claim 9 to read:
  - (Currently amended) A computer product comprising a computer readable medium for a computer, comprising a set of instructions, which, when loaded into said computer, configure the computer to carry out each of the acts in any one of claims 1-3.
6. Change claim 10, line 1, the "decoder " to " decoder apparatus".

### **REASONS FOR ALLOWANCE**

The following is an examiner's statement of reasons for allowance:

7. The prior Art of record and in particular Sivasankaran et al. paper titled "Twin-Stack Decoding of Recursive Systematic Convolutional Codes"- published in IEEE transaction on communications vol. 49, no. 7, July 2001, pages 1158-1167, teaches:

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- (Currently amended) A method for source decoding a variable-length soft-input codewords sequence ( $y[1:T]$ ) into a soft-output bit sequence ( $A_v[1:T]$ ), the variable-length soft-input input codewords sequence ( $y[1:T]$ ) encoded in accordance with a VLC codewords table, the method comprising the acts of:
  - B. a second subsequent stage of post-processing the stored intermediate data for generating the soft-output bit sequence ( $A_v[1:T]$ ), a soft-output ( $A(x[t])$ ) being provided for each bit.

However, the prior art do not teach, suggest, or otherwise render obvious:

- A. a first stage of implementing a stack decoding algorithm for a sequential estimation of a hard-output bit sequence of said variable length soft-input codewords sequence, wherein at **each of the sequential estimation, a stack of paths is reordered placing a current path having a smallest cumulative metric among paths listed in the stack at a top of the stack**, including storage of intermediate data contained in the stack and generated by the stack decoding algorithm;

As in claim 1.

8. Claims 2,3,5,6,8,9 and 11-14 depend from claim 1.
9. Claims 7,10 and 15 have similar language as in claim 1.
10. Claims 16 and 17 depend from claim 15.

***Conclusion***

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Rizk whose telephone number is (571) 272-8191. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronics Business Center (EBC) at 866-217-9197 (toll-free)

Sam Rizk, MSEE, ABD

Examiner

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*[Handwritten signature]*  
9/29/06

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